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The Commonwealth of Massachusetts
Executive Office of Public Safety and Security
Fire Safety Commission

Automatic Sprinkler Appeals Board

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MAURICE M. PILETTE
CHAIRMAN

RODERICK J. FRASER, JR.
VICE CHAIR

Docket # 2011-09
22 Shattuck Street
Lowell, Massachusetts

AUTOMATIC SPRINKLER APPEALS BOARD DECISION

A) Statutory and Regulatory Framework

This is an administrative hearing held in accordance with Massachusetts General Laws, Chapter 30A; Chapter 148, section 26G and Chapter 6, section 201, to determine whether to affirm an Order of the Lowell Fire Department requiring Richard E. Cavanaugh (hereinafter referred to as the "Appellant") to install automatic sprinklers in a building owned by him located at 22 Shattuck Street, Lowell, MA

B) Procedural History

By written notice received by the Appellant on June 16, 2011, the Lowell Fire Department issued an Order of Notice to the Appellant informing him of the provisions of M.G.L. c. 148, s. 26G, and the Department's determination to require the installation of automatic sprinklers in the Appellants' building, located at 22 Shattuck Street, Lowell, MA. The Appellant filed an appeal of said Order with this Board on July 15, 2011. The Board held a hearing on this matter on August 10, 2011, at the Department of Fire Services, Stow, Massachusetts.

Appearing on behalf of the Appellant was Jay R. Mason, Architect and building owner, Richard E. Cavanaugh. Appearing on behalf of the Lowell Fire Department was First Assistant City Solicitor, Kimberley A. McMahon and Captain Timothy P. Casey of the Lowell Fire Department, Fire Prevention Office.

Present for the Board were: Maurice M. Pilette, Chairman; Thomas Coulombe; Bartholomew Shea, Designee of the Boston Fire Commissioner; Aime DeNault; and George Duhamel. Peter A. Senopoulos, Esquire, was the Attorney for the Board.

C) Issue(s) to be Decided

Whether the Board should affirm, reverse or modify the determination of the Lowell Fire Department requiring sprinklers in the Appellant's building, in accordance with the provisions of M.G.L. c.148 § 26G?

D) Evidence Received

1. Application for Appeal filed by Appellant
2. Statement in Support of Appeal
 - 2A-1. Exterior Photograph of Building
 - 2A-2. Exterior Photograph of Building
 - 2A-3. Proposed First Floor Plan
 - 2A-4. Proposed Second Floor Plan
 - 2A-5. Existing First Floor Plan
 - 2A-6. Existing Second Floor Plan
 - 2B. Building Code Study
 - 2C. Review of building from the Lowell Historic Board (with attachments)
 - 2D. Order of Notice of the Lowell Fire Department
3. Notice of Hearing to the Appellant
4. Notice of Hearing to Lowell Fire Department
5. Copies of two Memoranda that accompany Hearing Notices
6. Appellant's Diagram of Building (items 6A-H)
7. Stipulations of the Parties

E) Subsidiary Findings of Fact

- 1) By written notice received by the Appellant on June 16, 2011, the Lowell Fire Department issued an Order of Notice to the Appellant informing him of the provisions of M.G.L. c. 148, s. 26G, and the fire department's determination to require the installation of automatic sprinklers in the Appellant's building, located at 22 Shattuck Street, Lowell, MA. The Appellant filed an application for an appeal of said Order with this Board on July 15, 2011. The Board held a hearing on this matter on August 10, 2011, at the Department of Fire Services, Stow, Massachusetts.
- 2) The Appellant testified that the building at issue is a two story, brick building built in 1859. The building is in a historic district in the City of Lowell. The building was most recently used and occupied as a museum with an A-3 use group classification. Additionally, there were one or more residential units on the second floor. The Appellant recently purchased the building with the intention of modifying the interior floor space into office space to be used as a law office. The classification of the building would be changed to a "B" use group classification. The building, which is the subject of the appeal is over 7,500 sq. ft.
- 3) The Appellant testified that he is not sure of the exact extent and scope of work and that a contractor has not been selected yet. The Appellant has applied for a permit to conduct

demolition activities and plans on securing a full building permit as details of the project are finalized.

- 4) The Appellant indicated that the alterations to the interior structure will consist of the demolition and rebuilding or relocation of many of the interior walls throughout the building to convert the use of the building from a museum to an office building. Additionally, several existing bathrooms will be demolished, renovated and reconfigured and/or located for better accessibility. The existing residential kitchen will be demolished and two new kitchenettes will be constructed. The project will include all necessary electrical and plumbing work in addition to resurfacing/buffing hardwood floors, the installation of carpets and the reconfiguration of some ceiling areas.
- 5) The Appellant indicated that he is of the opinion that the project as planned is not a level 3 renovation as per 780 CMR (the State Building Code) and therefore probably would not be required to install a sprinkler system under said code, since the renovation did not affect/exceed 50% of the floor area. However, the City Building Department has not made a final determination on this issue yet. Appellant does acknowledge that M.G.L. c. 148, s. 26G may apply, but he requests a reasonable waiver of the sprinkler requirements based upon the historic significance of the building. The Appellant indicated that the building features original trims and ceiling details which he considered of a historic nature, particularly given its age. The Appellant agrees that the size of the building exceeds 7,500 sq. ft., including the floor area of the basement.
- 6) The Appellant also contends that the planned modifications are not “major in scope” and therefore the provisions of s. 26G sprinkler requirements should not be triggered. To support this conclusion, the Appellant suggested that in calculating the areas altered, only the actual floor area physically occupied by any new or modified walls should be used to calculate the affected work area. Additionally, the Appellant indicated that the planned work is not of a structural nature.
- 7) The Appellant testified that the assessed value of the building is approximately \$373,000. The anticipated costs of the project at this time are between \$100,000.00 to \$150,000.00. The Appellant also testified that the installation of sprinklers throughout the building would be at an estimated cost of between \$37,000.00 to \$47,000.00.
- 8) In support of the position of the Lowell Fire Department, Captain Casey testified that the Order of Notice was issued based upon the overall floor area of the building, which is clearly over 7,500 s.f., combined with the significant nature and scope of the planned work. He indicated that he believes that the work is clearly “Major in Scope” as defined in this board’s guidance document issued in October 2009. He indicated that the Appellant’s very limited method of calculating the floor area impacted by the alterations is neither accurate nor reasonable and that the Appellant has provided no significant documentation nor technical information to warrant a sprinkler waiver or modified sprinkler system under M.G.L. c. 148, s. 26G based upon the historical significance of this building.
- 9) Chief Casey also indicated that there are many other historic buildings within the City of Lowell that have sprinkler systems and believes that this building should also be similarly sprinklered.

F) Ultimate Findings of Fact and Conclusions of Law

- 1) The relevant provisions of M.G.L. c. 148, s. 26G, state, (in pertinent part): “Every building or structure, including any additions or major alterations thereto, which totals, in the aggregate, more than 7,500 gross square feet in floor area shall be protected throughout with an adequate system of automatic sprinklers in accordance with the provisions of the state building code.” This law reflects amendments to the statute enacted by Chapter 508 of the Acts and Resolves of 2008. The provisions apply to “the construction of buildings, structures or additions ***or major modifications*** (emphasis added) thereto, which total, in the aggregate, more than 7,500 gross square feet *permitted after January 1, 2010*”. (Sec. 6, Chapter 508 of the Acts of 2008).
- 2) The Appellant does not contest a finding that the building consists of over 7,500 s.f. in floor area.
- 3) On October 14, 2009, this Board issued a general advisory document to guide persons who may be impacted by the amendments to s. 26G. In the memorandum, the Board discussed the meaning of the words “major alterations” as those terms are used in the statute. The Board indicated that it would be guided by the Massachusetts Appeals Court case of *Congregation Beth Shalom & Community Center, Inc. v. Building Commissioner of Framingham et. Al., 27 Mass. App. Ct. 276 (1989)*.

In said case, the Court stated that the terms “major alterations” shall include “any work, not repairs, which is “major” in scope or expenditure, and which results in changes affecting a substantial portion of the building.” In its decision, the Court looked at the nature of the planned work and would require sprinklers throughout the building if “the extra cost of installing sprinklers would be moderate in comparison to the total cost of the work contemplated...” or “if the physical work being done is of such scope that the additional effort to install sprinklers would be substantially less than it would have been if the building were intact.” Accordingly, the Board indicated that it would consider certain factors established in the *Congregation Beth Shalom case*, to determine whether “major” alterations or modifications are taking place. Such factors include reviewing: **(A) the nature** of the actual work and **(B) the scope** of the work or cost/ benefit of sprinkler installation.

In determining the **nature** of the work, the Board will determine if the planned physical work is the type of work that would make the effort to install sprinklers substantially less than it would have been if the building were intact or is the work merely minor repairs or cosmetic vs. major alterations.

- 4) In determining the **scope** of the work, the Board will determine if the alterations affect a substantial portion of the building. This requires a review to determine how much of the building is being affected by the work; **or** a determination that the cost of installing sprinklers is moderate in comparison to the total cost of the work.

To assist fire officials, building owners and construction project managers in making decisions, the Board established two presumptions that may be used to determine if the scope

of the planned alterations or modifications are “major” thus requiring sprinklers to be installed throughout a building. They concluded:

- 1) Major alterations or modifications are reasonably considered major in scope when such work affects thirty-three (33) % or more of the “total gross square footage” of the building, calculated in accordance with section 26G.
- 2) Major alterations or modifications are reasonably considered major in scope or expenditure, when the total cost of the work (excluding costs relating to sprinkler installation) is equal to or greater than thirty-three (33) % of the assessed value of the subject building, as of the date of permit application.

It was the conclusion of the Board that if the nature of the work is the type of work described in **A** and also meets at least one of the two presumptions described in **B** above, then it can be reasonable to conclude that the alterations or modifications are “Major”, thus requiring sprinklers throughout the building.

- 5) Based upon the facts presented at the hearing, the Board finds that the described work is considered major. The planned physical work is the type of work that would make the effort to install sprinklers in those affected areas substantially less than it would have been if the building were intact. The planned work is not limited to minor repairs or cosmetic in nature.

The type of work involving demolition and the erection of new walls, plumbing, electrical and the repositioning of existing walls and doors and some ceiling areas is the type of work that would be considered “major alterations.” Accordingly, the board concludes that the nature of the work is significant. The Board also determines that the work is major in scope based upon the limits established by the Board in its October 14, 2009 memorandum. According to a review of the plans, it clearly appears that the planned work impacts areas, which are at least 33% of the floor area of the building. Appellant’s position that only the actual physical space occupied by a particular wall should be used to calculate “affected floor area” is flawed. Applying this formula would result in the rare installation of sprinklers notwithstanding major alterations or modification activity occurring throughout most portions of a building. Applying such a drastically limited formula would clearly frustrate the public safety intent of the law which is to trigger the installation of sprinklers in existing buildings once the building owner decides to conduct “major alterations” or build an addition to certain non-residential buildings.

G) Decision of the Automatic Sprinkler Appeals Board

Based upon the evidence and testimony presented at the hearing, the Board hereby upholds the determination of the Lowell Fire Department to install sprinklers throughout the building in accordance with the requirements of M.G.L. c. 148, § 26G.

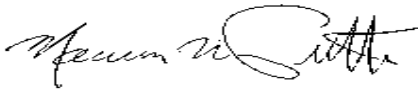
H) Vote of the Board

Maurice M. Pilette, Chairman	In Favor
Thomas Coulombe	In Favor
Bartholomew Shea, Designee, Boston Fire Department	In Favor
Aime DeNault	In Favor
George Duhamel	In Favor

I) Right of Appeal

You are hereby advised you have the right to appeal this decision, in whole or in part, within thirty (30) days from the date of receipt of this order, pursuant to section 14 of chapter 30A of the General Laws.

SO ORDERED,



Maurice Pilette, PE, Chairman

Dated: September 15, 2011

A COPY OF THIS DECISION AND ORDER WAS FORWARDED BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED TO:

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